

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. (Original) A signal processing system comprising
at least one user-set parameter for establishing user-determined system settings,
at least one compander,
a system volume control for setting system gain, and
at least one transform engine responsive to the at least one user-set parameter for
controlling operation of the compander and setting the system volume control.
2. (Original) The signal processing system of claim 1 wherein the user-set parameter
includes at least one of user volume control level, user minimum output level, and
source input dynamic range.
3. (Original) The signal processing system of claim 1 wherein the transform engine
controls the operation of the compander by setting at least one of a group comprising
kneepoints, attack and release parameters, gain calculation coefficients, and zero dB
offset values.
4. (Original) The signal processing system of claim 1 wherein the at least one
compander comprises a plurality of compressors, and at least a plurality of such
compressors is responsive to the transform engine.
5. (Original) The signal processing system of claim 1 wherein the at least one transform
engine comprises a plurality of transform engines and the at least one compander
comprises a plurality of compressors, and each such transform engine controls at least
one associated compressor.
6. (Original) The signal processing system of claim 5 further including a central power
estimator mixer responsive to the plurality of compressors.
7. (Original) The signal processing system of claim 1 further including an input signal
preprocessor responsive to an input signal for supplying a processed input to the

- companion, and wherein the companion operates on the processed input to provide a companion output to the system volume control.
8. (Original) The signal processing system of claim 7 wherein the input signal preprocessor includes an input level adjuster.
 9. (Original) The signal processing system of claim 7 wherein the input signal preprocessor includes at least one of a group comprising input selection, analog-to-digital conversion, bandsplit filtering and equalization.
 10. (Previously Presented) The signal processing system of claim 1 further including an output signal processor responsive to an output of the system volume control for generating a system output.
 11. (Original) The signal processing system of claim 10 wherein the system output is at least one of a group comprising single channel audio output, multi-channel audio output, equalized outputs, and multi-amplified outputs.
 12. (Original) The signal processing system of claim 3 further including a statistics engine for monitoring at least one companion operating parameter and for generating a histogram in accordance with the monitored companion operating parameter.
 13. (Original) The signal processing system of claim 12 further including an input level adjuster responsive to an input signal, and wherein the statistics engine monitors at least one operating parameter of the input level adjuster.
 14. (Original) The signal processing system of claim 12 wherein the statistics engine further includes an analysis engine for analyzing the histogram and generating a control signal in accordance therewith, and wherein the companion is responsive thereto.
 15. (Original) The signal processing system of claim 12 wherein the statistics engine further include an analysis engine for analyzing the histogram and generating a control signal in accordance therewith, and wherein the input level adjuster is responsive thereto.
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16. (Original) The signal processing system of claim 1 wherein the at least one user-set parameter comprises a user interface for establishing user-set operation, set-up and configuration commands.
17. (Original) The signal processing system of claim 16 further including a calibrator/annunciator responsive to the user interface for implementing in the compander the user-determined system settings.
18. (Original) The signal processing system of claim 10 further including a noise extractor responsive to the system output and an environmental input for generating a compensation input to the transform engine.
19. (Original) A signal processing system comprising
at least one compander,
a system volume control for setting system gain,
an input signal preprocessor responsive to an input signal for supplying an input to the compander, and wherein the compander operates on the input to provide a compander output to the system volume control,
at least one transform engine responsive to at least one user-set parameter for controlling at least one operating characteristic of the compander and the system volume control,
an output signal processor responsive to an output of the system volume control for generating a reference signal,
a noise extractor responsive to the reference signal and an environmental input for generating a compensation input to the transform engine.
20. (Original) A signal processing system comprising
an output signal processor for receiving an input signal and generating an output reference signal,
a noise extractor responsive to the reference signal and an environmental input for generating a compensation input, and
a volume control responsive to the compensation input for establishing an offset to system gain.

21. (Original) The signal processing system of claim 20 further including a plurality of output signal processors each receiving an input signal and generating an output reference signal, and wherein the noise extractor is responsive to the plurality of output reference signals.
 22. (Original) The signal processing system of claim 21 further including a plurality of volume controls responsive to the compensation input.
 23. (Original) The signal processing system of claim 20 further including an input level adjuster responsive to an input signal for adjusting the input signal to expected parameters.
 24. (Original) The signal processing system of claim 23 wherein the input level adjuster includes at least one function of a group comprising input selection, analog-to-digital conversion, bandsplit filtering and equalization.
 25. (Original) The signal processing system of claim 23 further including a statistics engine responsive to historical data for modifying system operating parameters in accordance therewith.
 26. (Original) The signal processing system of claim 20 further including a user interface responsive to the input signal for establishing user-set operation, set-up and configuration commands.
 27. (Original) The signal processing system of claim 26 further including a calibrator/annunciator responsive to the user interface for adjusting system settings.
 28. (Original) The signal processing system of claim 18 further including a calibrator/annunciator responsive to the noise extractor for adjusting operating parameters of the compander.
 29. (Original) The signal processing system of claim 18 further including a calibrator/annunciator responsive to a user interface for adjusting operating parameters of the compander.
 30. (Original) The signal processing system of claim 28 further including a statistics engine responsive to the noise extractor for adjusting operating parameters of the compander.
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31. (Previously Presented) The signal processing system of claim 1 wherein the user-set parameter includes a user minimum output level.
32. (Previously Presented) The signal processing system of claim 1 wherein the user-set parameter includes a source input dynamic range.
33. (Previously Presented) The signal processing system of claim 1 wherein the user-set parameter includes at least two of user volume control level, user minimum output level, and source input dynamic range.
34. (Previously Presented) The signal processing system of claim 12 wherein the statistics engine further includes an analysis engine for analyzing the histogram and generating a control signal in accordance therewith, and wherein the transform engine is responsive thereto.
35. (New) The signal processing system of claim 19, wherein the noise extractor obtains a noise signal from the environmental input and wherein the compensation input is derived from the noise signal.
36. (New) The signal processing system of claim 35, wherein the noise signal is obtained by comparing the environmental input and the reference signal, the reference signal representing a desired signal generated by the system.
37. (New) The signal processing system of claim 19, wherein the reference signal represents a desired system output signal.
38. (New) The signal processing system of claim 20, wherein the noise extractor extracts a noise signal from the environmental input and the compensation input is derived from the noise signal.
39. (New) The signal processing system of claim 20, wherein the output reference signal represents a desired system output.